



City of Oakdale  
1584 Hadley Avenue North  
Oakdale, MN 55128

**ENGINEERING SPECIFICATIONS**  
**CITY OF OAKDALE NO. 2531**

**CONCRETE CURBING**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Construction of cast-in-lace concrete facilities as follows:
    - a. Curb and Gutter
    - b. Driveway Pavement
    - c. Valley Gutter
  
- B. Related Sections:
  - 1. MN/DOT Specification 2211: Aggregate Base
  
- C. Method of Measurement:
  - 1. Curb and Gutter:
    - a. Measure by length in feet along the face of the curb at the gutter line.
    - b. Measure each design type separately.
  - 2. Remove and Replace Concrete Curb and Gutter:
    - a. Measure by length in feet along the face of the curb at the gutter line for spot repair work as directed by the Engineer.
    - b. Includes all labor, equipment, and materials.
  - 3. Driveway Pavement:
    - a. Measure by area in square feet for each thickness.
    - b. Includes furnishing and placing granular base material.
  - 4. Valley Gutter:
    - a. Measure by area in square feet.
  
- D. Basis of Payment:
  - 1. Payment for concrete construction shall be at the Contract Unit Price as listed on Bid Form. All associated work items shall be considered incidental.

**1.02 REFERENCES**

- A. MN/DOT Specification 2531: Concrete Curbing.



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- B. City Plate No. STRT-1.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. All materials shall be in accordance with the respective MN/DOT specifications as follows:
1. MN/DOT 2461: Concrete
  2. MN/DOT 3149: Granular Materials
  3. MN/DOT 3301: Reinforcement Bars
  4. MN/DOT 3702: Preformed Joint Filler

### **2.02 ACCESSORIES**

- A. All materials shall be in accordance with the respective MN/DOT Specification as follows:
1. MN/DOT 3917: Concrete Treating Oil
  2. Curing Materials:
    - a. MN/DOT 2742: Curing Paper
    - b. MN/DOT 2756: Plastic Sheeting
    - c. MN/DOT 3754: Membrane Curing Compound.
    - d. MN/DOT 3755: Extreme Service Membrane Cure.

### **2.03 CONCRETE MIX DESIGNATION**

- A. Based on method of placement as follows:
1. Manual Placement – Mix No. 3A32
  2. Slip-form Placement – Mix No. 3A22
- B. Valley gutters and driveway aprons shall be high-early strength concrete.

## **PART 3 EXECUTION**

### **3.01 FOUNDATION PREPARATION**

- A. Excavate shape and compact foundation to the planned section and grade.
- B. Prepare driveway apron foundation concurrently with curb and gutter foundation.
- C. Remove unsuitable subgrade soil as directed.



- D. Provide and compact granular material to the required depth as indicated on the plans.

### 3.02 INSTALLATION

A. Notice

1. Provide a minimum 24-hour notice to all affected property owners prior to access disruption.

B. Staging

1. Place all driveway aprons within 24 hours of curb and gutter placement.

C. Forms

1. Provide forms, which are capable of sustaining the concrete in the proper line, grade, and cross section until set.
2. Coat all contact surfaces with form treating material conforming to MN/DOT 3902 prior to concrete placement.

D. Joint Construction

1. Construct joints perpendicular to the subgrade.
2. Align with similar joints in adjacent work.
3. Place transverse joints at right angles to the alignment.
4. Transverse Expansion Joints
  - a. Fill with ½ inch preformed joint filler material.
  - b. Place as follows:
    1. At 65 foot intervals on all tangent section.
    2. Three (3) feet on each side of all catch basins.
    3. At the end of all curved sections.
    4. At the ends of curved portions of entrance and street returns.
    5. Where new construction surrounds or adjoins any existing fixed object.
5. Contraction Joints
  - a. Provide at ten (10) feet intervals in curb or curb and gutter constructions.
  - b. Provide twenty (20) feet intervals in solid median constructions.
  - c. Form or saw to a minimum two (2) inches depth from all exposed surfaces.

E. Metal Reinforcement

1. Provide and place as shown on the plans.

F. Placing and Finishing

1. Wet foundation and inside form faces immediately prior to concrete placement.
2. Fill all voids by hand tamping or internal vibration.



3. Strike off to the required grade and float smooth.
4. Hand-float top surface of curb face.
5. Round joints and edges  $\frac{1}{2}$  inch radii.
6. Lightly brush all exposed surfaces to a uniform texture.
7. Fill cavities with mortar when side forms are removed.

G. Slip-form Machine Placement

1. Placement by an extrusion type machine in lieu of fixed forms in permitted.
2. Final product must meet standards for fixed-form placement.
3. Hand-finish as necessary to obtain specified finish and texture.

H. Curing and Protection

1. Provide curing for minimum 72-hour period after finishing.
2. During cold weather, protect concrete from frost damage.
3. Blanket Curing Method:
  - a. Cover concrete with waterproof paper or plastic after finishing.
  - b. Envelop concrete and prevent water vapor loss.
  - c. After curing, test exposed surfaces with treating oil.
  - d. Apply two coats totaling 0.05 gallon per square yard coverage.
4. Membrane and Extreme Service Curing Method
  - a. Coat all exposed surfaces with curing compound within one hour after finishing.
  - b. Apply uniformly at a rate of one gallon per square foot of surface area with an approved airless sprayer.
  - c. Mix as required to maintain a homogenous mixture.
  - d. Respray as directed to provide proper coating.

I. Joint Sealing

1. Joint sealing is not required.

J. Backfill Construction

1. Backfill and compact adjacent area with selected materials to the cross-section shown on the plans.
2. Protect concrete from damage during backfill and compaction.

### 3.03 TOLERANCES

- A. Finish gutter flow lines to eliminate low spots and avoid water entrapment.
- B. Deviations greater than  $\frac{5}{16}$  inch from a ten (10) foot straight edge on tangent lines or grades will be considered as unacceptable work.
- C. Remove and replace unacceptable work as directed.

### END OF SECTION